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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/579,292	05/25/2000	Russell W. Bell	060705-1260	7226

7590 10/07/2004

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EXAMINER
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LAFORGIA, CHRISTIAN A

ART UNIT	PAPER NUMBER
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2131

DATE MAILED: 10/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/579,292

Applicant(s)

BELL, RUSSELL W.

Examiner

Christian La Forgia

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 21 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. The amendment filed on 21 June 2004 has been noted and made of record.
2. Claims 1-22 have been presented for examination.

### *Response to Arguments*

3. Addressing the Applicant's assertion that the Examiner agreed that Patent No. 6,567,405 to Borella et al. was cited incorrectly during a telephone conversation on 24 September 2003 is incorrect. U.S. Patent No. 6,567,405 is a continuation filed under 37 CFR 1.53(d) of U.S. Patent No. 6,353,614. Paragraph 7 of 37 CFR 1.53(d) states:

A request for an application under this paragraph is the specific reference required by 35 U.S.C. 120 to every application assigned the application number identified by this request.

35 U.S.C. 120 states:

An application for patent for an invention disclosed in the manner provided by the first paragraph of section 112 of this title in an application previously filed in the United States, or as provided by section 363 of this title, which is filed by an inventor or inventors named in the previously filed application shall have the same effect, as to such invention, as though filed on the date of the prior application, if filed before the patenting or abandonment of or termination of proceedings on the first application or on an application similarly entitled to the benefit of the filing date of the first application and if it contains or is amended to contain a specific reference to the earlier filed application.

Therefore, U.S. Patent No. 6,567,405 has, in effect, the filing date of the prior application, in this case 05 March 1998 (date of which U.S. Patent No. 6,353,614 was filed), thereby making the reference prior art and the rejection based upon said art proper. Furthermore, if there was any new matter, U.S. Patent No. 6,567,405 would have been filed under a continuation-in-part with an earlier filing date to the matter covered in the prior application and the filing date of the second application for any new material.

4. Applicant's arguments with respect to claims 1-22 have been considered but are moot in view of the new ground(s) of rejection.
5. See further rejections that follow.

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***Claim Rejections - 35 USC § 101***

6. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

7. As per claims 1-22, merely claimed as a computer program representing a computer listing *per se*, that is, descriptions or expressions of such a program and that is, descriptive material *per se*, non-functional descriptive material, and is not statutory because it is not a physical “thing” nor a statutory process, as there are not “acts” being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed aspects of the invention which permit the computer program’s functionality to be realized. Since a computer program is merely a set of instructions capable of being executed by a computer, the program itself is not a process, without the computer-readable medium needed to realize the computer program’s functionality. In contrast, a claimed computer-readable medium encoded with a computer program defines structural and functional interrelationships between the computer program and the medium which permit the computer program’s functionality to be realized, and is thus statutory. **Warmerdam**, 33 F.3d at 1361, 31 USPQ2d at 1760. **In re Sarkar**, 588 F.2d 1330, 1333, 200 USPQ 132, 137 (CCPA 1978). See MPEP § 2106(IV)(B)(1)(a).

***Claim Rejections - 35 USC § 112***

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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9. Claims 1-8 and 16-22 recite the limitation "said computer network" in claims 1 and 16.

There is insufficient antecedent basis for this limitation in the claim.

10. Claims 3 and 4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The variable *x* proceeding DSL is undefined and therefore renders the claim indefinite. The Applicant is reminded that although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

11. Claims 18-20 and 22 recite the limitation "said computer network." There is insufficient antecedent basis for this limitation in the claim because there are two networks in the parent claim. Therefore it is unclear which network the "said computer network" is referring to.

***Claim Rejections - 35 USC § 103***

12. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

13. Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,567,405 to Borella et al., hereinafter Borella, in view of U.S. Patent No. 6,633,547 to Akatsu et al., hereinafter Akatsu.

14. As per claims 1 and 16, Borella teaches a method of providing a bridge/router within a small office, home office computer network comprising a series of computers, comprising the steps of:

determining a media access control address of each of the series of computers within the computer network (Abstract; Figures 2 [block 44], 7, 8; column 2, line 51 to column 3, line 5;

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column 3, line 46 to column 4, line 8; column 5, lines 7-57; column 6, line 46-57);

receiving a request from a first computer within the computer network, either to communicate with a second computer within the computer network or to communicate with a wide area network (WAN) (Figures 1 [block 12], 10 [block 142]; column 10, lines 25-45);

in response to the request being to communicate with the second computer, determining whether the media access control address of the second computer has previously been determined (column 10, line 59 to column 11, line 32); and,

in response to the request being to communicate with the WAN, performing a protocol conversion and providing communication between the first computer and the WAN (Figure 10 [block 144]; column 10, lines 31-58);

if the media access control address of the second computer has previously been determined, providing communication between the first computer and the second computer (column 10, line 59 to column 11, line 32). It would have been obvious to one of ordinary skill in the art to modify the system of Borella to use the MAC address of the devices instead of the IP address. One would be motivated to provide for such a function because it would be easier to map a 128-bit external IP address to a 48-bit MAC address, instead of a 128-bit internal IP address.

15. Borella does not teach a software bridge/router being stored on of a series of computer in a computer network. It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the routing scheme described above using a software bridge/router, since Akatsu discloses on column 13, lines 37-53 that hardware and software

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bridge/router systems are interchangeable. See MPEP § 2144.06; see *In re Ruff*, 256 F.2d 590, 118 USPQ 340 (CCPA 1958).

16. Regarding claims 2 and 17, Borella teaches wherein the computer network comprises at least a first local area network and a second local area network (column 3, lines 61 to column 4, line 8).

17. Regarding claims 3 and 10, Borella teaches wherein communication between the small office, home office network and the WAN is provided by at least one xDSL modem (Figure 1 [block 26]; column 3, line 46 to column 4, line 8). It would have been obvious to one of ordinary skill in the art at the time the invention was made provide a DSL modem in the invention of Borella, as there are several DSL modems that provide for routing functions so small businesses and homes do not have to invest in costly routers to network their small offices or homes.

18. With regards to claims 4 and 20, Borella teaches wherein the connection to the wide area network is a digital subscriber line (Figure 1 [block 26]; column 3, line 46 to column 4, line 8). It would have been obvious to one of ordinary skill in the art at the time the invention was made provide a digital subscriber line in the invention of Borella, as the need for DSL is more convenient for homes and offices if there are going to be several computers networked for internet access.

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19. Regarding claims 5 and 21, Borella teaches wherein the step of determining a media access control address of each of the computers is performed by a first computer that then stores the media access control addresses within an address table (Figures 7, 8, 10, 11, 12; column 9, lines 15-51; column 10, lines 25-58). It would have been obvious to one of ordinary skill in the art to modify the system of Borella to use the MAC address of the devices instead of the IP address. One would be motivated to provide for such a function because it would be easier to map a 128-bit external IP address to a 48-bit MAC address, instead of a 128-bit internal IP address.

20. With regards to claims 6 and 22, Borella teaches wherein the first computer is the first computer within the computer network to locate a digital subscriber line at the initialization of the computer network (Figure 1 [block 26]; column 3, line 46 to column 4, line 8). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the first computer to find DSL the first computer, as the router provided by Borella would be the first and only computer to find the line as that what it was built for.

21. Concerning claim 7, Borella teaches wherein the first computer provides a bridge/route between the small office, home office, and a wide area network (column 3, line 61 to column 4, line 8).

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22. Regarding claim 8, Borella teaches wherein the communication between the first computer and the second computer comprises the transmission of data (Figure 1; column 3, line 46 to column 4, line 8).

23. As per claim 9, Borella teaches a bridge/router system for providing a logical connection between a first local area network (LAN), having a first series of computers therein, a second LAN, having a second series of computers therein, and a wide area network, wherein the first LAN and the second LAN are located within a small office, home office (SOHO) computer network, comprising:

a master computer which is capable of identifying all computers within the first LAN and the second LAN (Figure 1 [block 26]; column 3, line 46 to column 4, line 8); and

a first slave computer located within the first LAN, and a second slave computer located within said second LAN (column 6, lines 46-65; column 8, lines 48-67),

wherein the master computer provides for communication between the first slave computer and the second slave computer, and between the SOHO computer network and the wide area network (WAN) (column 3, line 61 to column 4, line 8).

24. Borella does not teach a software bridge/router. It would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the routing scheme described above using a software bridge/router, since Akatsu discloses on column 13, lines 37-53 that hardware and software bridge/router systems are interchangeable. See MPEP § 2144.06; see *In re Ruff*, 256 F.2d 590, 118 USPQ 340 (CCPA 1958).

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25. Concerning claim 11, Borella teaches wherein the master computer is determined during initiation of the first and second LANs, the master computer being a computer within the first LAN or the second LAN which first detects the digital connection (Figure 1 [block 26]; column 3, line 46 to column 4, line 8). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the first computer to find DSL the first computer, as the router provided by Borella would be the first and only computer to find the line as that what it was built for.

26. With regards to claim 12, Borella teaches wherein all of the first series of computers and the second series of computers are identified by a media access control address (Figure 10 [block 144]; column 8, lines 48-67; column 10, lines 31-58).

27. Regarding claim 13, Borella teaches wherein each of the first series of computers and the second series of computers are capable of being the master computer (Figure 1 [block 26]; column 3, line 46 to column 4, line 8). It would have been obvious to one of ordinary skill in the art at the time the invention was made to make the first computer to find DSL the first computer, as the router provided by Borella would be the first and only computer to find the line as that what it was built for.

28. With regards to claim 14, Borella teaches wherein computers within the first series of computers are capable of communicating with other computers within the first series of computers without the assistance of the master computer, and the second series of computers are

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capable of communicating with other computers within the second series of computers without the assistance of the master computer (Figures 9, 10; column 3, line 61 to column 4, line 8; column 10, lines 47-58).

29. Concerning claim 15, Borella teaches wherein a refresh cycle is performed periodically to determine whether the master computer has ceased to function, the refresh cycle resulting in determination of a new master computer if the master computer has ceased to function (column 10, lines 25-58).

30. With regards to claim 18, Borella teaches wherein the software bridge/router provides a bridge/router between the first local area network and the second local area network, and between the computer network and a wide area network (column 3, lines 61 to column 4, line 8).

31. Concerning claim 19, Borella teaches wherein said computer network comprising a single local area network (Figure 1 [block 12]; column 3, line 46 to column 4, line 8).

### ***Conclusion***

32. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

33. The following patents are cited to further show the state of the art with respect to software bridge/routers, such as:

United States Patent No. 6,418,324 to Doviak et al., which is cited to show implementing a software bridge/router.

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34. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

35. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

36. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christian La Forgia whose telephone number is (703) 305-7704. The examiner can normally be reached on Monday thru Thursday 7-5.


37. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on (703) 305-9648. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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38. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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